

APPENDIX III  
LABORATORY REPORT FOR CHLOROPICRIN

California Environmental Protection Agency

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 Air Resources Board

**Trichloronitromethane (Chloropicrin) Analytical Results for Application  
Air Monitoring Samples**

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This report has been reviewed by staff of the California Air Resources Board and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Air Resources Board, nor does mention of trade names of commercial products constitute endorsement or recommendation for use.

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## **1.0 INTRODUCTION**

The Department of Pesticide Regulation (DPR) requested the Air Resources Board (ARB) to conduct structural application air monitoring for trichloronitromethane (chloropicrin). This report covers the analytical and quality assurance results for a chloropicrin structural application occurring over a six (6) day period in Placer County. DPR requested a method estimated quantitation limit (EQL) of  $0.1 \mu\text{g}/\text{m}^3$ . The EQL achieved during this project was  $0.14 \mu\text{g}/\text{m}^3$ .

## **2.0 METHOD DEVELOPMENT**

### **2.1 Overview**

XAD-4 cartridges are used for application air sampling. Sample cartridges are stored at or below four (4) degrees centigrade ( $^{\circ}\text{C}$ ) before extraction. Sample cartridges are extracted with three (3) milliliters (ml) of methylene chloride (DCM) and desorbed in an ultrasonic bath. Sample extracts are analyzed using a gas chromatograph/mass selective detector (GC/MSD), which is operated in the selected ion-monitoring mode (SIM). Sample analysis and quantitation used the external standard method. The estimated quantitation level for this method, based on  $0.144 \text{ cubic meters (m}^3\text{)}$  of air collected, and a final extract volume of three (3) ml, is  $0.14 \mu\text{g}/\text{m}^3$ .

### **2.2 Calibration Curve**

Laboratory staff used standard concentrations of approximately 5, 10, 20, 50, 100, and 150 ng/ml to produce a six (6) point calibration curve. All calibrations curves performed had a  $r^2$  (variance) greater than or equal to 0.995. Laboratory staff performed calibrations at the beginning of the monitoring program, after instrument maintenance, after remaking of internal standard, and whenever the continuing calibration verification standard (CCV) did not fall within  $\pm 20$  percent (%) of the expected value.

### **2.3 Method Detection Limit (MDL)**

The MDL calculation follows the United States Environmental Protection Agency procedures for calculating MDL's. Using the analysis of seven low-level matrix spikes (5.0 ng/ml), the MDL and EQL for a three (3) ml extract is calculated as follows:

*s = the standard deviation of the concentration calculated for the seven replicate spikes.*  
*For Chloropicrin: s = 0.4204 ng/ml*

$$MDL = (3.14) \times (s) = (3.14) \times (0.4204) = 1.32 \text{ ng/ml}.$$
$$EQL = (5) \times (MDL) = (5) \times (1.32) = 6.60 \text{ ng/ml}$$
$$EQL \text{ for total ng/sample} = 19.80 \text{ ng/sample}^*$$

\* assuming a 3 ml final extract volume

Based on a total collection volume of 0.144 m<sup>3</sup> the EQL would be 0.14 µg/m<sup>3</sup>. Staff report results above the EQL to three (3) significant figures. Results below the EQL but greater than or equal to the MDL are reported as detected (DET). Results less than MDL are reported as <MDL.

#### 2.4 Method Development

Instrument reproducibility, collection and extraction efficiency, storage stability and breakthrough studies were performed and reported in the document "Air Sampling Cartridge Method Development and Analysis Results for Application Monitoring of Trichloronitromethane (Chloropicrin)" dated January 28, 2002. No additional method development was required for this structural application project.

### 3.0 CHLOROPICRIN APPLICATION AIR MONITORING SAMPLE RESULTS.

The laboratory received 132 application samples plus two (2) field spikes, two (2) ARB-Sacramento spikes, one (1) trip blank, and four (4) trip spikes on July 4, 2004. Table 1 presents the results of the analysis of the chloropicrin application air samples by sampler location.

### 4.0 ANALYTICAL QUALITY CONTROL SAMPLES

#### 4.1 System Blanks

Laboratory staff analyzes a system blank with each analytical batch, after each CCV, after every tenth sample and after samples containing high levels of chloropicrin or co-extracted contaminants. Staff defines the analytical batch as all the samples extracted together, but not to exceed twenty (20) samples. The system blank is run to insure the solvent and instrument do not contribute interferences to the analysis, and to minimize carryover from high level samples. All system blanks were less than the MDL.

#### 4.2 Method Blanks

Laboratory staff analyzed a method blank with each analytical batch. This is an XAD-4 cartridge prepared and analyzed as described for the application samples. Laboratory

staff analyzed thirteen (13) method blanks during this project. All method blank results were less than the MDL.

#### *4.3 Laboratory Control Samples (LCS)*

Laboratory staff analyzed a LCS with each analytical batch. A LCS is an XAD-4 cartridge spiked with 228 ng of chloropicrin. The stock standard used to prepare the LCS did not come from a different lot number than the stock standard used for method calibration. Different staff prepared the LCS and calibration standards on different days. The LCS is extracted and analyzed as described for the samples. The LCS recoveries averaged 91.37% with a standard deviation of 4.97%.

#### *4.4 Continuing Calibration Verification Standards (CCV)*

Following standard lab procedures, laboratory staff analyzed a CCV after every calibration curve, after every tenth (10) sample and at the end of an analytical batch. The CCV must be within  $\pm$  20% of the expected value. If any of the CCVs are outside this limit, the affected samples are re-analyzed. The CCV target value for this project was 19.8 ng/ml. All CCV's were within  $\pm$  20 % of the expected value.

#### *4.5 Laboratory Duplicates*

No laboratory duplicates were run with this project.

### **5.0 FIELD, TRIP, AND LABORATORY SPIKES AND TRIP BLANKS**

During the application project, four (4) trip, two (2) field spikes, and two (2) ARB-Sacramento spikes along with four (4) laboratory spikes and one (1) trip blank were analyzed. Laboratory staff prepared all spikes at 228 ng/sample of chloropicrin

#### *5.1 Laboratory Spikes*

Table 2 presents the results of the laboratory spikes. The average chloropicrin recovery was 86.98% with a standard deviation of 2.94%.

#### *5.2 Trip Spikes*

Table 2 presents the results of the trip spikes. The average recovery for chloropicrin was 87.34% with a standard deviation of 4.71%.

#### *5.3 Field Spikes*

Table 2 presents the results of the field spikes. The field spikes were sampled during the twenty-four (24) hour period prior to pesticide application. Two spiked cartridges were used at the Loomis site (C006, C0010). Unspiked collocated samples were

collected along with the spiked samples at the Loomis site. The chloropicrin quantitations for the samples run concurrently with the field spikes showed values less than the EQL. Therefore, background correction was not made to the field spike data.

Two additional spiked cartridges were used to collect samples at the ARB Sacramento site (FS7081, FS7082). The average recovery for the two sets of spikes was 80.45% with a standard deviation of 7.85%.

#### 5.4 *Trip Blanks*

Table 2 presents the results of the trip blanks. One (1) trip blank, with result less than the MDL, was received during this project.

### 6.0 DISCUSSION

During the project, 132 application samples were analyzed. Forty-two (42) samples had results greater than the EQL of 19.8 ng/sample. The concentrations ranged from 20 to 555 ng/sample. Thirty-three (33) samples had results reported as detected.

After the sonication step, it was noted that five samples had caps that were loose, and possibly, some of the extraction solvent and analyte may have been lost. These samples are 43, 44, 45, 49, and 51. The extract level for each of the samples with loose caps was adjusted to match the level of the method blank. These samples were analyzed and the results reported. It is unknown whether any chloropicrin was lost.

After initial analysis, two (2) samples had results above the high calibration point. These samples (29 and 30) were diluted and the results reported in Table 1. To verify that chloropicrin did not breakthrough during the collection of samples 29 and 30 the back sections were analyzed. Chloropicrin was not detected in either back section sample. Log number twenty-one (21) was not used during this study.

LCS spiked at 228 ng/sample and processed in the same way as field samples had recoveries that averaged 91.37%. Based on three (3) standard deviations from the mean, the acceptable recovery range was 76.47% to 106%. All LCS fell within this range.

The ARB Sacramento spike results were lower than the Loomis field spikes. The Loomis spikes averaged a recovery of 86.7%, while the ARB Sacramento spikes average 74.2%. To make sure that the lower values were not the result of analyte breakthrough during sample collection the back sections were analyzed. Chloropicrin was not detected in the back sections of either set of spikes. No other anomalous events occurred during the extraction and analysis of these samples. The LCS analyzed with this batch of samples had a recovery of 94 %.

**Table 1: Structural Application Air Monitoring Results for Chloropicrin**

Site	Log Number	Sample ID	Date Received	Date Analyzed	Chloropicrin amount (ng/sample)
East Inner	17	EI-C-1	7/1/04	7/8/04	2.51E+02
	32	EI-C-2	7/1/04	7/12/04	1.50E+02
	46	EI-C-3	7/4/04	7/13/04	1.83E+02
	60	EI-C-4	7/4/04	7/14/04	5.50E+01
	74	EI-C-5	7/4/04	7/15/04	1.47E+02
	90	EI-C-6	7/4/04	7/16/04	7.93E+01
	104	EI-C-7	7/4/04	7/26/04	Detect
	118	EI-C-8	7/4/04	7/27/04	Detect
	132	EI-C-9	7/4/04	7/27/04	<MDL
East Outer	24	EO-C-1	7/1/04	7/8/04	2.00E+01
	39	EO-C-2	7/1/04	7/12/04	<MDL
	53	EO-C-3	7/4/04	7/13/04	2.94E+01
	67	EO-C-4	7/4/04	7/14/04	<MDL
	81	EO-C-5	7/4/04	7/15/04	4.04E+01
	97	EO-C-6	7/4/04	7/16/04	<MDL
	111	EO-C-7	7/4/04	7/26/04	<MDL
	125	EO-C-8	7/4/04	7/27/04	<MDL
	139	EO-C-9	7/4/04	7/27/04	<MDL
North	15	N-C-1	7/1/04	7/8/04	1.70E+02
	14	N-C-1C	7/1/04	7/8/04	1.72E+02
	30	N-C-2	7/1/04	7/13/04	4.75E+02
	29	N-C-2C	7/1/04	7/13/04	5.55E+02
	44	N-C-3	7/4/04	7/13/04	2.46E+02
	43	N-C-3C	7/4/04	7/13/04	2.83E+02
	57	N-C-4C	7/4/04	7/14/04	1.86E+02
	58	N-C-4	7/4/04	7/14/04	1.73E+02
	72	N-C-5	7/4/04	7/15/04	8.15E+01
	71	N-C-5C	7/4/04	7/15/04	9.14E+01
	88	N-C-6	7/4/04	7/16/04	4.03E+01
	87	N-C-6C	7/4/04	7/16/04	4.43E+01
	102	N-C-7	7/4/04	7/26/04	3.70E+01
	101	N-C-7C	7/4/04	7/26/04	3.53E+01
	116	N-C-8	7/4/04	7/26/04	Detect
	115	N-C-8C	7/4/04	7/26/04	Detect
	130	N-C-9	7/4/04	7/27/04	Detect
	129	N-C-9C	7/4/04	7/27/04	Detect

**Table 1: Structural Application Air Monitoring Results for Chloropicrin**

Site	Log Number	Sample ID	Date Received	Date Analyzed	Chloropicrin Amount (ng/sample)
Northeast Inner	16	NEI-C-1	7/1/04	7/8/04	8.55E+01
	31	NEI-C-2	7/1/04	7/12/04	3.57E+01
	45	NEI-C-3	7/4/04	7/13/04	6.34E+01
	59	NEI-C-4	7/4/04	7/14/04	2.39E+01
	73	NEI-C-5	7/4/04	7/15/04	4.44E+01
	89	NEI-C-6	7/4/04	7/16/04	2.07E+01
	103	NEI-C-7	7/4/04	7/26/04	Detect
	117	NEI-C-8	7/4/04	7/26/04	Detect
	131	NEI-C-9	7/4/04	7/27/04	<MDL
	7	NEI-C-B	7/1/04	7/7/04	<MDL
Northeast Outer	23	NEO-C-1	7/1/04	7/8/04	4.97E+01
	38	NEO-C-2	7/1/04	7/12/04	2.00E+01
	52	NEO-C-3	7/4/04	7/13/04	3.59E+01
	66	NEO-C-4	7/4/04	7/14/04	Detect
	80	NEO-C-5	7/4/04	7/15/04	3.05E+01
	96	NEO-C-6	7/4/04	7/16/04	Detect
	110	NEO-C-7	7/4/04	7/26/04	Detect
	124	NEO-C-8	7/4/04	7/27/04	Detect
	138	NEO-C-9	7/4/04	7/27/04	<MDL
Northwest Inner	13	NWI-C-1	7/1/04	7/8/04	3.55E+01
	28	NWI-C-2	7/1/04	7/12/04	2.23E+02
	42	NWI-C-3	7/4/04	7/13/04	4.17E+01
	56	NWI-C-4	7/4/04	7/14/04	4.53E+01
	70	NWI-C-5	7/4/04	7/15/04	2.82E+01
	86	NWI-C-6	7/4/04	7/16/04	Detect
	100	NWI-C-7	7/4/04	7/26/04	Detect
	114	NWI-C-8	7/4/04	7/26/04	<MDL
	128	NWI-C-9	7/4/04	7/27/04	<MDL
	5	NWI-C-B	7/1/04	7/7/04	<MDL

**Table 1: Structural Application Air Monitoring Results for Chloropicrin**

Site	Log Number	Sample ID	Date Received	Date Analyzed	Chloropicrin Amount (ng/sample)
Northwest Outer	22	NWO-C-1	7/1/04	7/8/04	Detect
	37	NWO-C-2	7/1/04	7/12/04	6.92E+01
	51	NWO-C-3	7/4/04	7/13/04	Detect
	65	NWO-C-4	7/4/04	7/14/04	Detect
	79	NWO-C-5	7/4/04	7/15/04	Detect
	95	NWO-C-6	7/4/04	7/16/04	<MDL
	109	NWO-C-7	7/4/04	7/26/04	Detect
	123	NWO-C-8	7/4/04	7/27/04	<MDL
	137	NWO-C-9	7/4/04	7/27/04	<MDL
Southeast	18	SE-C-1	7/1/04	7/8/04	Detect
	33	SE-C-2	7/1/04	7/12/04	<MDL
	47	SE-C-3	7/4/04	7/13/04	Detect
	61	SE-C-4	7/4/04	7/14/04	<MDL
	75	SE-C-5	7/4/04	7/15/04	<MDL
	91	SE-C-6	7/4/04	7/16/04	Detect
	105	SE-C-7	7/4/04	7/26/04	<MDL
	119	SE-C-8	7/4/04	7/27/04	<MDL
	133	SE-C-9	7/4/04	7/27/04	<MDL
	8	SE-C-B	7/1/04	7/7/04	<MDL
South Inner	19	SI-C-1	7/1/04	7/8/04	<MDL
	34	SI-C-2	7/1/04	7/12/04	Detect
	48	SI-C-3	7/4/04	7/13/04	Detect
	62	SI-C-4	7/4/04	7/14/04	<MDL
	76	SI-C-5	7/4/04	7/15/04	<MDL
	92	SI-C-6	7/4/04	7/16/04	Detect
	106	SI-C-7	7/4/04	7/26/04	<MDL
	120	SI-C-8	7/4/04	7/27/04	<MDL
	134	SI-C-9	7/4/04	7/27/04	<MDL
South Outer	25	SO-C-1	7/1/04	7/8/04	<MDL
	40	SO-C-2	7/1/04	7/12/04	<MDL
	54	SO-C-3	7/4/04	7/13/04	<MDL
	68	SO-C-4	7/4/04	7/14/04	<MDL
	82	SO-C-5	7/4/04	7/15/04	<MDL
	98	SO-C-6	7/4/04	7/16/04	<MDL
	112	SO-C-7	7/4/04	7/26/04	<MDL
	126	SO-C-8	7/4/04	7/27/04	<MDL
	140	SO-C-9	7/4/04	7/27/04	<MDL

**Table 1: Structural Application Air Monitoring Results for Chloropicrin**

Site	Log Number	Sample ID	Date Received	Date Analyzed	Chloropicrin Amount (ng/sample)
Southwest Outer	26	SWO-C-1	7/1/04	7/8/04	<MDL
	36	SWO-C-2	7/1/04	7/12/04	Detect
	50	SWO-C-3	7/4/04	7/13/04	<MDL
	64	SWO-C-4	7/4/04	7/14/04	<MDL
	78	SWO-C-5	7/4/04	7/15/04	<MDL
	94	SWO-C-6	7/4/04	7/16/04	<MDL
	108	SWO-C-7	7/4/04	7/26/04	<MDL
	122	SWO-C-8	7/4/04	7/27/04	<MDL
	136	SWO-C-9	7/4/04	7/27/04	<MDL
Southwest Inner	20	SWI-C-1	7/1/04	7/8/04	<MDL
	35	SWI-C-2	7/1/04	7/12/04	Detect
	49	SWI-C-3	7/4/04	7/13/04	<MDL
	63	SWI-C-4	7/4/04	7/14/04	<MDL
	77	SWI-C-5	7/4/04	7/15/04	<MDL
	93	SWI-C-6	7/4/04	7/16/04	<MDL
	107	SWI-C-7	7/4/04	7/26/04	<MDL
	121	SWI-C-8	7/4/04	7/27/04	<MDL
	135	SWI-C-9	7/4/04	7/27/04	<MDL
	9	SWI-C-B	7/1/04	7/7/04	<MDL
West	12	W-C-1	7/1/04	7/8/04	Detect
	27	W-C-2	7/1/04	7/12/04	9.28E+01
	41	W-C-3	7/4/04	7/13/04	3.33E+01
	55	W-C-4	7/4/04	7/14/04	Detect
	69	W-C-5	7/4/04	7/15/04	3.11E+01
	85	W-C-6	7/4/04	7/16/04	Detect
	99	W-C-7	7/4/04	7/26/04	Detect
	113	W-C-8	7/4/04	7/26/04	<MDL
	127	W-C-9	7/4/04	7/27/04	<MDL
Vent Cycle Extra	83	XNE-C-5	7/4/04	7/15/04	Detect
	84	XNW-C-5	7/4/04	7/15/04	Detect
Not Used	21				NA

### Table 1 Notes: Application Monitoring Results,

If analytical result is  $\geq$  MDL and  $<$  EQL it is reported in the table as detected (DET). Levels at or above the EQL are reported as the actual measured value and are reported to three significant figures.

ng = nanogram

Sample ID (Sample identification) numbers followed by the letter C are collocated samples for the samples with the corresponding number.

Site location identification:

EI:	East Inner
EO:	East Outer
N:	North
NEI:	Northeast Inner
NEO:	Northeast Outer
NWO:	Northwest Outer
NWI:	Northwest Inner
SE:	Southeast
SI:	South Inner
SO:	South Outer
SWO:	Southwest Outer
SWI:	Southwest Inner
W:	West
XNE:	Extra Northeast
XNW:	Extra Northwest

**Table 2: QC Sample Results**  
**Chloropicrin Application**

Quality Control Type	Laboratory ID	Date Analyzed	Chloropicrin amount (ng/sample)	Percent Recovery*
Lab Spike (228 ng)	LS707	7/7/04	192.48	84.42
	LS708	7/8/04	192.66	84.50
	LS709	7/9/04	202.86	88.97
	LS712	7/12/04	205.26	90.03
Trip Spike (228 ng)	C001	7/7/04	184.88	81.09
	C002	7/7/04	197.61	86.67
	C003	7/7/04	209.85	92.04
	C004	7/7/04	204.22	89.57
Field Spike (228 ng)	C006	7/7/04	189.99	83.33
	C010	7/7/04	205.45	90.11
ARB-SAC Spike (228 ng)	FS7081	7/8/04	172.74	75.76
	FS7082	7/8/04	165.54	72.61
Trip Blank	C011	7/7/04	<MDL	

Notes:

- \* Field spike values are not corrected for background levels.
- ID Identification
- <MDL Less than method detection limit
- ng Nanograms

**APPENDIX IV**  
**FUMIGATION LOG**

## Equipment at Job Site

fans \_\_\_\_\_  
 extension cords \_\_\_\_\_  
 cap locks \_\_\_\_\_  
 pins \_\_\_\_\_  
 test lines \_\_\_\_\_  
 shooting lines \_\_\_\_\_  
 comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## Fumigant Calculations

Time :	10
	11
# of Cubes :	<u>45,000</u>
	12
Dosage :	10
	01
Tarp :	Excellent
	03
Seal :	Excellent
	05
Wind :	<u>10</u>
	07
Volume :	<u>65</u>
	10
Under Seal :	<u>51ab</u>
	11
Temperature :	<u>67°</u>
	02
Hrs. Exposed % :	<u>34</u>
	03
Rel Humidity :	<u>47%</u>
	05
AMPS Per Fan :	<u>3.5</u>
	08
HLT :	<u>32.8</u>
	09
DOZ :	<u>44.9</u>
	11
GAS :	<u>126.3</u> LBS
	12
OZ HR :	<u>1088.5</u>
	01
SHOOT RATE :	<u>4.6</u>
	03
	05
	07
	08

## ARRIVAL INSPECTION

Complete this form at the time you arrive at the job site.  
 Note any and all damage at the property site before you begin work. Report any major damage to the office prior to beginning work. If the occupant is on site when you arrive have them sign off on any damage found.

DAMAGED?			
AREA	YES	NO	COMMENTS
GUTTERS			
WINDOWS			
PIPES			
FENCES			
ANTENNAS			
WIRES			
AWNINGS			
ROOF			
PATIO COVERS			
PRE PREP DONE?			
OTHER			
OTHER			
OTHER			

DATE \_\_\_\_\_

CREW CHIEF \_\_\_\_\_

OCCUPANT \_\_\_\_\_

TERMINAL READING ~~FRST~~  
 7-2-04 6:15 - 17°2

holding 23°2 AT  
 21 hrs Job Regu.  
 13 more hours or  
 45.5 LBS  
 shot 45.5 LBS AT  
 2:00 PM 7-1-04  
 4:00 PM holding 30°2  
 7-1-04 need 17 more  
 hours

APPENDIX V  
METEOROLOGICAL DATA  
1 MINUTE AVERAGES

**SF1MinAvg**  
**Loomis Fumigation 1 MIN AVG MET**

Log Date: 2004/07/02

Printing: 2004/07/07

Item Time	RWS (MPH)	RWD (Deg)	AT (C)	RH (%)	BP (mmHg)	Sigma (Deg)	( )
08:38	----	----	----	----	----	----	----
08:39	----	----	----	----	----	----	----
08:40	5.31	197.8	20.76	62.7	747.2	1.2	0
08:41	----	----	----	----	----	----	----
08:42	----	----	----	----	----	----	----
08:43	----	----	----	----	----	----	----
08:44	----	----	----	----	----	----	----
08:45	4.87	187.6	20.92	62.4	747.3	1.2	0
08:46	4.68	164.6	20.92	61.6	747.2	1.1	0
08:47	2.63	157.9	20.87	62.2	747.3	1.1	0
08:48	4.07	172.2	21.08	62.1	747.3	1.1	0
08:49	5.07	168.8	21.03	61.3	747.3	1.1	0
08:50	2.68	116.4	21.57	61.5	747.3	1.1	0
08:51	3.33	166.6	21.74	60.1	747.3	1.0	0
08:52	5.80	206.8	21.74	60.7	747.3	1.0	0
08:53	6.39	190.5	21.79	59.4	747.3	1.1	0
08:54	5.14	200.0	21.41	59.5	747.3	1.1	0
08:55	5.02	207.9	21.47	60.4	747.3	1.1	0
08:56	6.19	184.7	21.63	59.4	747.4	1.1	0
08:57	5.43	166.6	21.52	59.5	747.5	1.1	0
08:58	2.85	182.5	22.01	59.8	747.5	1.1	0
08:59	5.24	177.2	22.18	57.9	747.5	1.0	0
09:00	4.82	174.6	21.68	58.2	747.5	1.0	0
09:01	4.29	188.3	21.57	59.4	747.5	1.0	0
09:02	4.43	190.8	21.57	59.9	747.5	1.0	0
09:03	4.51	173.6	22.01	59.9	747.6	1.0	0
09:04	4.41	175.7	22.12	57.9	747.6	1.0	0
09:05	4.68	174.3	21.96	58.1	747.6	1.0	0
09:06	3.43	164.0	21.79	58.5	747.6	1.0	0
09:07	6.09	202.8	22.01	58.2	747.6	1.0	0
09:08	5.09	208.2	22.07	57.9	747.7	1.0	0
09:09	5.87	191.9	22.01	57.6	747.7	1.0	0
09:10	5.04	184.4	21.74	57.7	747.7	1.0	0
09:11	3.85	184.1	21.96	58.5	747.7	1.0	0
09:12	2.53	140.1	22.23	57.4	747.7	0.9	0
09:13	4.46	179.8	22.39	57.1	747.7	0.9	0
09:14	4.82	191.4	22.56	56.8	747.7	0.9	0
09:15	5.26	190.9	22.56	55.7	747.7	0.9	0
09:16	4.73	198.9	22.28	56.2	747.7	0.9	0
09:17	4.68	194.4	22.61	56.0	747.7	0.9	0
09:18	2.72	180.7	22.67	55.7	747.7	0.9	0
09:19	4.19	187.4	22.83	55.5	747.7	0.9	0
09:20	3.43	165.1	22.99	55.9	747.7	0.9	0
09:21	3.80	149.5	23.10	55.0	747.7	0.8	0
09:22	4.68	163.5	23.10	54.7	747.7	0.8	0
09:23	4.34	194.9	22.99	55.7	747.7	0.8	0
09:24	4.16	235.6	22.88	55.8	747.7	0.8	0

## SF1MinAvg

## Loomis Fumigation 1 MIN AVG MET

Log Date: 2004/07/02

Printing: 2004/07/07

Item Time \	RWS (MPH)	RWD (Deg)	AT (C)	RH (%)	BP (mmHg)	Sigma (Deg)	( )
09:25	4.21	260.8	22.83	55.7	747.7	0.9	0
09:26	3.63	240.2	22.72	56.0	747.8	0.9	0
09:27	3.04	252.1	22.72	56.5	747.8	1.0	0
09:28	5.70	233.1	22.94	56.1	747.8	1.0	0
09:29	5.29	235.5	22.67	56.2	747.8	0.9	0
09:30	3.07	230.8	22.94	56.9	747.8	0.9	0
09:31	5.65	226.5	23.21	55.8	747.8	0.9	0
09:32	5.04	223.3	23.05	56.5	747.8	0.9	0
09:33	4.95	237.8	23.10	55.7	747.8	0.9	0
09:34	4.46	270.4	22.99	56.0	747.8	0.9	0
09:35	4.85	211.8	23.10	56.4	747.9	0.9	0
09:36	6.87	186.9	23.27	55.3	747.9	0.8	0
09:37	6.34	204.1	23.27	55.2	747.9	0.8	0
09:38	5.60	183.6	22.94	54.7	747.9	0.8	0
09:39	4.36	177.5	22.94	55.6	748.0	0.8	0
09:40	4.73	187.7	23.32	55.2	748.0	0.8	0
09:41	5.60	175.3	23.16	55.1	748.0	0.8	0
09:42	4.51	192.8	23.10	54.9	748.0	0.8	0
09:43	3.33	187.6	23.10	55.3	748.0	0.8	0
09:44	4.16	211.7	23.32	55.7	748.0	0.8	0
09:45	4.19	250.6	23.54	54.4	748.0	0.8	0
09:46	2.89	245.0	23.76	54.4	748.0	0.8	0
09:47	4.02	244.5	23.98	53.8	748.0	0.8	0
09:48	4.70	204.9	23.98	53.2	748.0	0.8	0
09:49	6.46	177.3	23.59	52.7	748.1	0.8	0
09:50	3.53	173.9	23.48	53.9	748.0	0.7	0
09:51	4.12	202.3	23.92	54.0	748.0	0.7	0
09:52	4.31	200.7	24.25	52.4	748.1	0.7	0
09:53	3.92	182.2	24.19	51.5	748.0	0.7	0
09:54	5.14	167.1	23.87	52.2	748.1	0.7	0
09:55	3.46	118.4	24.19	51.9	748.1	0.7	0
09:56	4.56	176.0	24.41	51.5	748.1	0.6	0
09:57	5.75	220.3	24.03	51.8	748.1	0.7	0
09:58	5.56	206.0	23.76	53.0	748.1	0.7	0
09:59	3.04	233.8	23.76	52.7	748.1	0.7	0
10:00	4.53	264.7	23.65	53.4	748.1	0.7	0
10:01	6.43	202.2	23.87	52.6	748.1	0.7	0
10:02	4.68	213.9	23.65	52.1	748.1	0.7	0
10:03	4.36	230.0	23.59	53.2	748.1	0.7	0
10:04	5.07	236.3	23.76	53.0	748.1	0.7	0
10:05	3.80	230.7	23.54	52.6	748.1	0.7	0
10:06	4.75	234.3	23.54	53.0	748.1	0.7	0
10:07	4.53	219.5	23.54	52.8	748.1	0.7	0
10:08	4.19	225.1	23.59	53.0	748.1	0.7	0
10:09	3.92	242.1	23.76	52.7	748.1	0.7	0
10:10	2.89	239.2	23.48	52.7	748.2	0.7	0
10:11	2.89	231.5	23.92	53.0	748.2	0.7	0

## SF1MinAvg

## Loomis Fumigation 1 MIN AVG MET

Log Date: 2004/07/02

Printing: 2004/07/07

Item Time \	RWS (MPH)	RWD (Deg)	AT (C)	RH (%)	BP (mmHg)	Sigma (Deg)	( )
10:12	3.97	238.6	23.87	51.8	748.2	0.7	0
10:13	2.65	260.4	23.87	51.8	748.2	0.7	0
10:14	---	---	---	---	---	---	---
10:15	---	---	---	---	---	---	---
10:16	---	---	---	---	---	---	---
10:17	---	---	---	---	---	---	---
10:18	---	---	---	---	---	---	---
10:19	---	---	---	---	---	---	---
10:20	---	---	---	---	---	---	---
10:21	---	---	---	---	---	---	---
10:22	---	---	---	---	---	---	---
10:23	---	---	---	---	---	---	---
10:24	---	---	---	---	---	---	---
10:25	---	---	---	---	---	---	---
10:26	---	---	---	---	---	---	---
10:27	---	---	---	---	---	---	---
10:28	---	---	---	---	---	---	---
10:29	---	---	---	---	---	---	---
10:30	---	---	---	---	---	---	---
10:31	---	---	---	---	---	---	---
10:32	---	---	---	---	---	---	---
10:33	---	---	---	---	---	---	---
10:34	---	---	---	---	---	---	---
10:35	---	---	---	---	---	---	---
10:36	---	---	---	---	---	---	---
10:37	---	---	---	---	---	---	---
10:38	---	---	---	---	---	---	---
10:39	---	---	---	---	---	---	---
10:40	---	---	---	---	---	---	---
10:41	---	---	---	---	---	---	---
10:42	---	---	---	---	---	---	---
10:43	---	---	---	---	---	---	---
10:44	---	---	---	---	---	---	---
10:45	---	---	---	---	---	---	---
10:46	---	---	---	---	---	---	---
10:47	---	---	---	---	---	---	---
10:48	---	---	---	---	---	---	---
10:49	---	---	---	---	---	---	---
10:50	---	---	---	---	---	---	---
10:51	---	---	---	---	---	---	---
10:52	---	---	---	---	---	---	---
10:53	---	---	---	---	---	---	---
10:54	---	---	---	---	---	---	---
10:55	---	---	---	---	---	---	---
10:56	---	---	---	---	---	---	---
10:57	---	---	---	---	---	---	---
10:58	---	---	---	---	---	---	---